

APPENDIX C: FREQUENCY DISTRIBUTION HISTOGRAMS OF SCALE SCORES

Scale Score Histogram for Mod-MSA Math Assessment

Grade 3

Histogram Bars

| SSTOT | Cum. | | Cum. | |
|-------|------|------|---------|---------|
| | Freq | Freq | Percent | Percent |
| 13 | 1 | 1 | 0.15 | 0.15 |
| 17 | 1 | 2 | 0.15 | 0.30 |
| 20 | 2 | 4 | 0.30 | 0.60 |
| 25 | 5 | 9 | 0.75 | 1.35 |
| 28 | 2 | 11 | 0.30 | 1.64 |
| 30 | 7 | 18 | 1.05 | 2.69 |
| 32 | 22 | 40 | 3.29 | 5.98 |
| 35 | 21 | 61 | 3.14 | 9.12 |
| 37 | 33 | 94 | 4.93 | 14.05 |
| 39 | 32 | 126 | 4.78 | 18.83 |
| 41 | 25 | 151 | 3.74 | 22.57 |
| 43 | 25 | 176 | 3.74 | 26.31 |
| 45 | 34 | 210 | 5.08 | 31.39 |
| 47 | 36 | 246 | 5.38 | 36.77 |
| 48 | 35 | 281 | 5.23 | 42.00 |
| 50 | 37 | 318 | 5.53 | 47.53 |
| 52 | 26 | 344 | 3.89 | 51.42 |
| 54 | 25 | 369 | 3.74 | 55.16 |
| 56 | 21 | 390 | 3.14 | 58.30 |
| 58 | 34 | 424 | 5.08 | 63.38 |
| 59 | 23 | 447 | 3.44 | 66.82 |
| 61 | 26 | 473 | 3.89 | 70.70 |
| 63 | 23 | 496 | 3.44 | 74.14 |
| 65 | 16 | 512 | 2.39 | 76.53 |
| 67 | 18 | 530 | 2.69 | 79.22 |
| 69 | 19 | 549 | 2.84 | 82.06 |
| 71 | 16 | 565 | 2.39 | 84.45 |
| 73 | 16 | 581 | 2.39 | 86.85 |
| 75 | 18 | 599 | 2.69 | 89.54 |
| 77 | 13 | 612 | 1.94 | 91.48 |
| 80 | 4 | 616 | 0.60 | 92.08 |
| 82 | 12 | 628 | 1.79 | 93.87 |
| 84 | 7 | 635 | 1.05 | 94.92 |
| 87 | 5 | 640 | 0.75 | 95.67 |
| 90 | 5 | 645 | 0.75 | 96.41 |
| 93 | 6 | 651 | 0.90 | 97.31 |
| 97 | 9 | 660 | 1.35 | 98.65 |
| 98 | 9 | 669 | 1.35 | 100.00 |

5 10 15 20 25 30 35

Scale Score Histogram for Mod-MSA Math Assessment

Grade 4

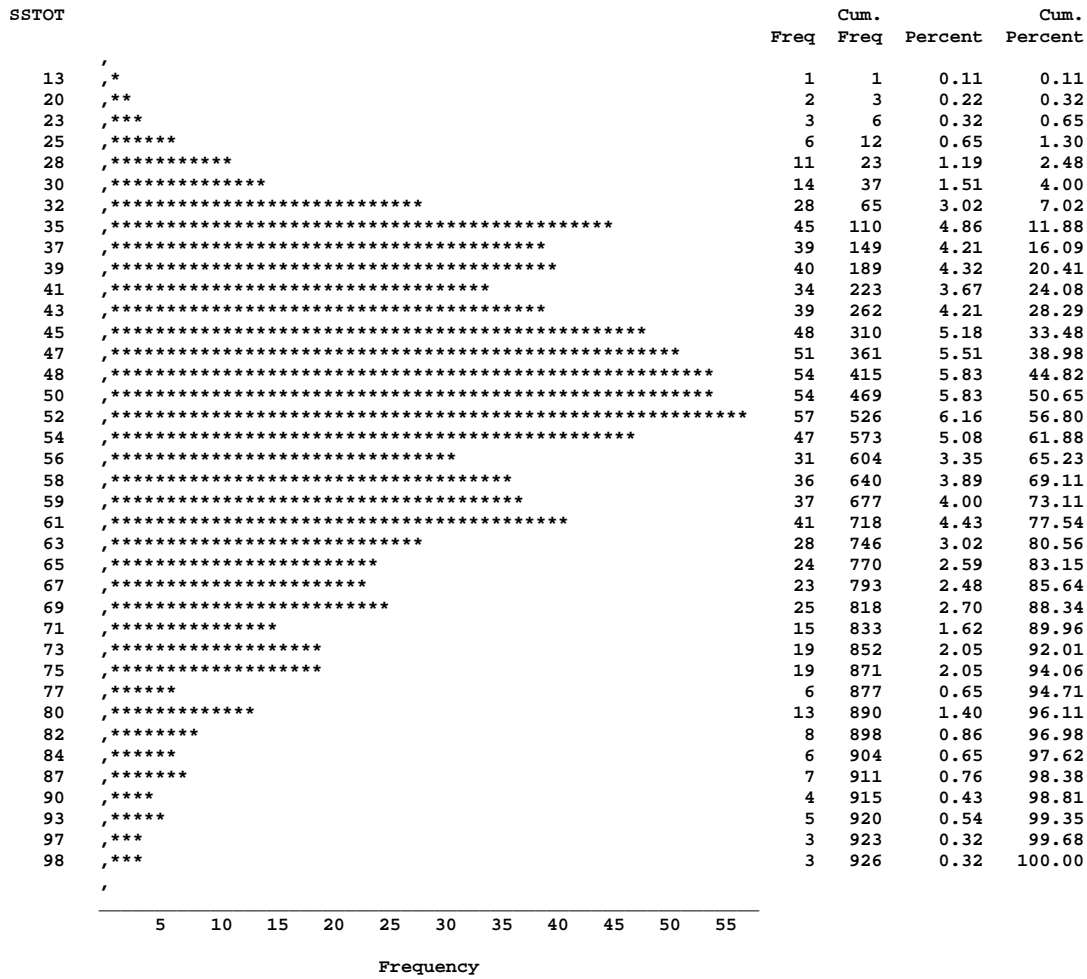
Histogram Bars

| SSTOT | | Freq | Cum. Freq | Percent | Cum. Percent |
|-------|--------|------|-----------|---------|--------------|
| 5 | ,* | 1 | 1 | 0.11 | 0.11 |
| 9 | ,** | 2 | 3 | 0.23 | 0.34 |
| 20 | ,** | 2 | 5 | 0.23 | 0.57 |
| 25 | ,*** | 3 | 8 | 0.34 | 0.92 |
| 28 | ,**** | 4 | 12 | 0.46 | 1.38 |
| 30 | ,***** | 14 | 26 | 1.61 | 2.98 |
| 32 | ,***** | 20 | 46 | 2.29 | 5.28 |
| 35 | ,***** | 27 | 73 | 3.10 | 8.37 |
| 37 | ,***** | 22 | 95 | 2.52 | 10.89 |
| 39 | ,***** | 35 | 130 | 4.01 | 14.91 |
| 41 | ,***** | 35 | 165 | 4.01 | 18.92 |
| 43 | ,***** | 32 | 197 | 3.67 | 22.59 |
| 45 | ,***** | 49 | 246 | 5.62 | 28.21 |
| 47 | ,***** | 38 | 284 | 4.36 | 32.57 |
| 48 | ,***** | 35 | 319 | 4.01 | 36.58 |
| 50 | ,***** | 42 | 361 | 4.82 | 41.40 |
| 52 | ,***** | 34 | 395 | 3.90 | 45.30 |
| 54 | ,***** | 33 | 428 | 3.78 | 49.08 |
| 56 | ,***** | 43 | 471 | 4.93 | 54.01 |
| 58 | ,***** | 40 | 511 | 4.59 | 58.60 |
| 59 | ,***** | 35 | 546 | 4.01 | 62.61 |
| 61 | ,***** | 31 | 577 | 3.56 | 66.17 |
| 63 | ,***** | 44 | 621 | 5.05 | 71.22 |
| 65 | ,***** | 35 | 656 | 4.01 | 75.23 |
| 67 | ,***** | 33 | 689 | 3.78 | 79.01 |
| 69 | ,***** | 26 | 715 | 2.98 | 82.00 |
| 71 | ,***** | 14 | 729 | 1.61 | 83.60 |
| 73 | ,***** | 15 | 744 | 1.72 | 85.32 |
| 75 | ,***** | 14 | 758 | 1.61 | 86.93 |
| 77 | ,***** | 18 | 776 | 2.06 | 88.99 |
| 80 | ,***** | 15 | 791 | 1.72 | 90.71 |
| 82 | ,***** | 19 | 810 | 2.18 | 92.89 |
| 84 | ,***** | 8 | 818 | 0.92 | 93.81 |
| 87 | ,***** | 11 | 829 | 1.26 | 95.07 |
| 90 | ,***** | 12 | 841 | 1.38 | 96.44 |
| 93 | ,***** | 10 | 851 | 1.15 | 97.59 |
| 97 | ,***** | 7 | 858 | 0.80 | 98.39 |
| 98 | ,***** | 14 | 872 | 1.61 | 100.00 |

Scale Score Histogram for MSA-MOD Math Assessment

Grade 5

Histogram Bars



Scale Score Histogram for MSA-MOD Math Assessment Grade 6

Histogram Bars

| SSTOT | | Freq | Cum. Freq | Percent | Cum. Percent |
|-------|--------|------|-----------|---------|--------------|
| 13 | ,** | 2 | 2 | 0.23 | 0.23 |
| 20 | ,* | 1 | 3 | 0.12 | 0.35 |
| 23 | ,*** | 3 | 6 | 0.35 | 0.70 |
| 25 | ,***** | 8 | 14 | 0.94 | 1.64 |
| 28 | ,***** | 18 | 32 | 2.11 | 3.76 |
| 30 | ,***** | 24 | 56 | 2.82 | 6.57 |
| 32 | ,***** | 23 | 79 | 2.70 | 9.27 |
| 35 | ,***** | 35 | 114 | 4.11 | 13.38 |
| 37 | ,***** | 39 | 153 | 4.58 | 17.96 |
| 39 | ,***** | 34 | 187 | 3.99 | 21.95 |
| 41 | ,***** | 47 | 234 | 5.52 | 27.46 |
| 43 | ,***** | 59 | 293 | 6.92 | 34.39 |
| 45 | ,***** | 51 | 344 | 5.99 | 40.38 |
| 47 | ,***** | 47 | 391 | 5.52 | 45.89 |
| 48 | ,***** | 39 | 430 | 4.58 | 50.47 |
| 50 | ,***** | 40 | 470 | 4.69 | 55.16 |
| 52 | ,***** | 32 | 502 | 3.76 | 58.92 |
| 54 | ,***** | 29 | 531 | 3.40 | 62.32 |
| 56 | ,***** | 37 | 568 | 4.34 | 66.67 |
| 58 | ,***** | 45 | 613 | 5.28 | 71.95 |
| 59 | ,***** | 30 | 643 | 3.52 | 75.47 |
| 61 | ,***** | 22 | 665 | 2.58 | 78.05 |
| 63 | ,***** | 23 | 688 | 2.70 | 80.75 |
| 65 | ,***** | 27 | 715 | 3.17 | 83.92 |
| 67 | ,***** | 19 | 734 | 2.23 | 86.15 |
| 69 | ,***** | 16 | 750 | 1.88 | 88.03 |
| 71 | ,***** | 11 | 761 | 1.29 | 89.32 |
| 73 | ,***** | 9 | 770 | 1.06 | 90.38 |
| 75 | ,***** | 12 | 782 | 1.41 | 91.78 |
| 77 | ,***** | 11 | 793 | 1.29 | 93.08 |
| 80 | ,***** | 5 | 798 | 0.59 | 93.66 |
| 82 | ,***** | 10 | 808 | 1.17 | 94.84 |
| 84 | ,***** | 5 | 813 | 0.59 | 95.42 |
| 87 | ,***** | 6 | 819 | 0.70 | 96.13 |
| 90 | ,***** | 7 | 826 | 0.82 | 96.95 |
| 93 | ,***** | 9 | 835 | 1.06 | 98.00 |
| 97 | ,***** | 6 | 841 | 0.70 | 98.71 |
| 98 | ,***** | 11 | 852 | 1.29 | 100.00 |

| | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|
| 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
|---|----|----|----|----|----|----|----|----|----|----|

Frequency

Scale Score Histogram for MSA-MOD Math Assessment

Grade 7

Histogram Bars

| SSTOT | | Freq | Cum. Freq | Percent | Cum. Percent |
|-------|--------|------|-----------|---------|--------------|
| 2 | ,* | 1 | 1 | 0.10 | 0.10 |
| 17 | ,* | 1 | 2 | 0.10 | 0.20 |
| 20 | ,* | 2 | 4 | 0.20 | 0.40 |
| 23 | ,*** | 5 | 9 | 0.50 | 0.90 |
| 25 | ,***** | 9 | 18 | 0.90 | 1.80 |
| 28 | ,**** | 8 | 26 | 0.80 | 2.60 |
| 30 | ,***** | 12 | 38 | 1.20 | 3.80 |
| 32 | ,***** | 16 | 54 | 1.60 | 5.40 |
| 35 | ,***** | 33 | 87 | 3.30 | 8.70 |
| 37 | ,***** | 45 | 132 | 4.50 | 13.20 |
| 39 | ,***** | 45 | 177 | 4.50 | 17.70 |
| 41 | ,***** | 51 | 228 | 5.10 | 22.80 |
| 43 | ,***** | 65 | 293 | 6.50 | 29.30 |
| 45 | ,***** | 63 | 356 | 6.30 | 35.60 |
| 47 | ,***** | 62 | 418 | 6.20 | 41.80 |
| 48 | ,***** | 61 | 479 | 6.10 | 47.90 |
| 50 | ,***** | 68 | 547 | 6.80 | 54.70 |
| 52 | ,***** | 49 | 596 | 4.90 | 59.60 |
| 54 | ,***** | 56 | 652 | 5.60 | 65.20 |
| 56 | ,***** | 40 | 692 | 4.00 | 69.20 |
| 58 | ,***** | 30 | 722 | 3.00 | 72.20 |
| 59 | ,***** | 35 | 757 | 3.50 | 75.70 |
| 61 | ,***** | 34 | 791 | 3.40 | 79.10 |
| 63 | ,***** | 31 | 822 | 3.10 | 82.20 |
| 65 | ,***** | 29 | 851 | 2.90 | 85.10 |
| 67 | ,***** | 28 | 879 | 2.80 | 87.90 |
| 69 | ,***** | 24 | 903 | 2.40 | 90.30 |
| 71 | ,***** | 29 | 932 | 2.90 | 93.20 |
| 73 | ,***** | 13 | 945 | 1.30 | 94.50 |
| 75 | ,***** | 13 | 958 | 1.30 | 95.80 |
| 77 | ,*** | 5 | 963 | 0.50 | 96.30 |
| 80 | ,***** | 15 | 978 | 1.50 | 97.80 |
| 82 | ,***** | 9 | 987 | 0.90 | 98.70 |
| 84 | ,** | 3 | 990 | 0.30 | 99.00 |
| 87 | ,** | 3 | 993 | 0.30 | 99.30 |
| 90 | ,** | 3 | 996 | 0.30 | 99.60 |
| 93 | ,* | 1 | 997 | 0.10 | 99.70 |
| 98 | ,** | 3 | 1000 | 0.30 | 100.00 |

10 20 30 40 50 60

Frequency

Scale Score Histogram for MSA-MOD Math Assessment

Grade 8

Histogram Bars

| SSTOT | | Cum. | | Cum. | |
|-------|--------|------|------|---------|---------|
| | | Freq | Freq | Percent | Percent |
| 20 | ,* | 1 | 1 | 0.10 | 0.10 |
| 23 | ,** | 3 | 4 | 0.29 | 0.39 |
| 25 | ,*** | 5 | 9 | 0.49 | 0.88 |
| 28 | ,**** | 8 | 17 | 0.79 | 1.67 |
| 30 | ,***** | 17 | 34 | 1.67 | 3.34 |
| 32 | ,***** | 34 | 68 | 3.34 | 6.69 |
| 35 | ,***** | 36 | 104 | 3.54 | 10.23 |
| 37 | ,***** | 55 | 159 | 5.41 | 15.63 |
| 39 | ,***** | 47 | 206 | 4.62 | 20.26 |
| 41 | ,***** | 73 | 279 | 7.18 | 27.43 |
| 43 | ,***** | 50 | 329 | 4.92 | 32.35 |
| 45 | ,***** | 65 | 394 | 6.39 | 38.74 |
| 47 | ,***** | 71 | 465 | 6.98 | 45.72 |
| 48 | ,***** | 58 | 523 | 5.70 | 51.43 |
| 50 | ,***** | 58 | 581 | 5.70 | 57.13 |
| 52 | ,***** | 44 | 625 | 4.33 | 61.46 |
| 54 | ,***** | 51 | 676 | 5.01 | 66.47 |
| 56 | ,***** | 39 | 715 | 3.83 | 70.30 |
| 58 | ,***** | 48 | 763 | 4.72 | 75.02 |
| 59 | ,***** | 41 | 804 | 4.03 | 79.06 |
| 61 | ,***** | 36 | 840 | 3.54 | 82.60 |
| 63 | ,***** | 24 | 864 | 2.36 | 84.96 |
| 65 | ,***** | 27 | 891 | 2.65 | 87.61 |
| 67 | ,***** | 15 | 906 | 1.47 | 89.09 |
| 69 | ,***** | 19 | 925 | 1.87 | 90.95 |
| 71 | ,***** | 15 | 940 | 1.47 | 92.43 |
| 73 | ,***** | 15 | 955 | 1.47 | 93.90 |
| 75 | ,***** | 15 | 970 | 1.47 | 95.38 |
| 77 | ,***** | 10 | 980 | 0.98 | 96.36 |
| 80 | ,*** | 6 | 986 | 0.59 | 96.95 |
| 82 | ,**** | 7 | 993 | 0.69 | 97.64 |
| 84 | ,** | 3 | 996 | 0.29 | 97.94 |
| 87 | ,* | 2 | 998 | 0.20 | 98.13 |
| 90 | ,* | 2 | 1000 | 0.20 | 98.33 |
| 93 | ,** | 3 | 1003 | 0.29 | 98.62 |
| 97 | ,** | 3 | 1006 | 0.29 | 98.92 |
| 98 | ,***** | 11 | 1017 | 1.08 | 100.00 |

| | | | | | | |
|----|----|----|----|----|----|----|
| 10 | 20 | 30 | 40 | 50 | 60 | 70 |
|----|----|----|----|----|----|----|

Frequency